

Code: 9A03704

R09

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December 2014

INSTRUMENTATION & CONTROL SYSTEMS
(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Explain the generalized measurement system and its functional elements with the help of a block diagram.
- 2 (a) Explain the working principle involved in L.V.D.T with a neat diagram.
(b) Define seebeck effect and peltier effect.
- 3 Explain the working principle of McLeod pressure gauge with a neat sketch.
- 4 Write a short note on the following with diagram:
(a) Ultrasonic fuel level.
(b) Cryogenic fuel level.
- 5 (a) Give the classification of mechanical tachometers.
(b) Explain the working principle involved in seismic instrument.
- 6 (a) Describe the working principle of unbonded strain gauge with a diagram.
b) (Write the differences between Bonded and unbonded strain gauges.
- 7 (a) Write a note on sling psychrometer.
(b) Explain the working principle of torsion meter with a diagram.
- 8 (a) Write the differences between open and closed systems.
(b) Explain servo mechanism.
